

What is claimed is:

- 1 1. A tube unit used for connecting internal equipment and external
2 equipment, comprising:
 - 3 an inner tube which lets liquid flow between the internal
4 equipment and the external equipment;
 - 5 a cable including an electric wire connected to the internal
6 equipment; and
 - 7 an outer tube which accommodates the inner tube and the
8 cable.
- 1 2. A tube unit according to Claim 1,
2 wherein the internal equipment is one of (a) a part of one of
3 artificial internal organs and a ventricular assist device that is
4 implanted in a living body and (b) equipment that is implanted in a
5 living body by medical treatment.
- 1 3. A tube unit according to Claim 1,
2 wherein the external equipment is equipment, out of
3 equipment that is used as one of artificial internal organs, a
4 ventricular assist device, and equipment used in medical treatment,
5 that is placed outside of a living body.
- 1 4. A tube unit according to Claim 1,
2 wherein the cable is one of a power cable for driving the
3 internal equipment and a cable for transmitting a signal for controlling
4 the internal equipment and/or a signal detected by the internal
5 equipment.
- 1 5. A tube unit according to Claim 1,

2 wherein the inner tube is one of a tube for supplying medication
3 to an affected part and a tube for supplying the internal equipment
4 with a lubricant and/or a coolant, which is/are required for proper
5 operation of the internal equipment.

1 6. A tube unit according to Claim 1,
2 wherein a channel through which a liquid can flow is formed by
3 the inner tube.

1 7. A tube unit according to Claim 1,
2 wherein a wire for preventing elongation of the inner tube and
3 the cable is accommodated in the outer tube.

1 8. A tube unit according to Claim 1,
2 further comprising caps that are respectively attached to an
3 outside of an engaging part where one end of the outer tube engages
4 a socket for the internal equipment and to an outside of an engaging
5 part where another end of the outer tube engages a socket for the
6 external equipment.

1 9. A tube unit according to Claim 1,
2 further comprising protective tubes that engage the caps, are
3 formed of an elastic material, and are attached to an outside of the
4 outer tube.

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1 10. An artificial internal organ system, including a tube unit according
2 to any of Claims 1 to 9.

1 11. A tube unit used for connecting a blood pump and a controller for

2 controlling the blood pump, comprising:
3 an inner tube for circulating a liquid between the blood pump
4 and the controller;
5 a cable including an electric wire connected to the blood pump;
6 and
7 an outer tube which accommodates the inner tube and the
8 cable.

1 12. A tube unit according to Claim 11,
2 wherein the tube unit comprises two inner tubes.

1 13. A tube unit according to Claim 11,
2 wherein the liquid circulated by the inner tube is one of water,
3 a disinfectant, and a physiological saline solution.

1 14. A tube unit according to Claim 11,
2 wherein the inner tube is made of one of polycarbonate
3 urethane, silicone, and polytetrafluoroethylene.

1 15. A tube unit according to Claim 11,
2 wherein the inner tube is one of a double-layer tube that has
3 polyvinylidene fluoride on an inside and thermoplastic polyurethane
4 on an outside and a double-layer tube that has polyvinylidene fluoride
5 on an inside and polycarbonate urethane on an outside.

1 16. A tube unit according to Claim 11,
2 wherein the electric wire is one of a electric wire for driving the
3 blood pump and a electric wire for transmitting a signal for controlling
4 the blood pump and/or a signal detected at a position of the blood

5 pump.

1 17. A tube unit according to Claim 11,
2 wherein the outer tube is made of a biocompatible material.

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1 18. A tube unit according to Claim 11,
2 wherein a surface of the outer tube is subjected to a flocking
3 process.

1 19. A tube unit according to Claim 11,
2 wherein an inside of the outer tube is filled with silicone gel.

1 20. A blood pump system, comprising:
2 a blood pump;
3 a controller for controlling the blood pump; and
4 a tube unit according to any of Claims 11 to 19.
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